

## COMMONWEALTH OF PENNSYLVANIA

## Department of Environmental Protection

March 28, 2008

717-705-4876

**SUBJECT:** Source Test Review  
B. Braun Medical, Inc.  
Donaldson Catalytic Ethylene Oxide Abatement System, Source ID S01  
Chemrox Deoxx Wet Scrubber, Source ID S02  
Hanover Twp., Lehigh County  
Title V Operating Permit No. 39-00055  
eFACTS # 1657425

**TO:** Becky Easley  
Air Quality Program  
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B. Braun Medical, Inc. operates an ethylene oxide medical equipment sterilization process at their Hanover Twp., Lehigh County facility. As a requirement of Title V Operating Permit No. 39-00055 the Donaldson Catalytic Abatement system and the Ethylene Oxide Scrubber used to control emissions must be tested to determine the ethylene oxide removal efficiency.

B. Braun Medical, Inc. conducted testing on scrubber on August 11, 2007 and the abatement system on September 6-7, 2007. Samples were collected in Tedlar bags at the inlet and outlet of the abatement system and the outlet of the scrubber, then analyzed by gas chromatograph. The test results are acceptable to the Department as a credible representation of the actual emissions under the operating conditions during testing and may be used for compliance determinations.

The following is a summary of data presented in the test report.

**Donaldson Abatement System Ethylene Oxide Removal Efficiency**

Run No.	1		2		3	
Test Date	9/6/07		9/7/07		9/7/07	
Sampling Location	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
Ethylene Oxide Concentration (ppmv)	32.80	0.61	101.84	0.93	38.57	0.69
Ethylene Oxide Removal Efficiency (%)	98.1		99.1		98.2	
Catalyst Bed Temperature (°F)	287		287		287	

**DEOXX Scrubber Ethylene Oxide Removal Efficiency**

Chamber No.	1	2	3
Test Date	8/11/07	8/11/07	8/11/07
Ethylene Oxide Introduced to Chamber (lbs)	43.6	41.8	49.5
Ethylene Oxide Remaining in Chamber Post Vacuum (lbs)	5.66	4.97	5.44
Ethylene Oxide Emissions at Scrubber Outlet (lbs)	0.28	0.15	0.26
Ethylene Oxide Removal Efficiency (%)	99.3	99.6	99.4

Red Data File- B. Braun Medical, Inc., Hanover Twp., Lehigh County  
Virendra Trivedi, Division of Permits, Title V Operating Permit No. 39-00055  
EPA/AKB  
AIMS/AKB  
Reading File, Source Testing Section